BASIC FRACTIONS (Equivalent fractions and simplifying fractions)

GRADE 2

AtoZrevision

Examination practice questions

You should have:

A ruler, protractor, compasses, a pen, pencil, eraser, calculator.
For some questions, you may need tracing paper.

Instructions

- Use **black** ink or ball-point pen.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**

Information

- The marks for each question are shown in brackets.
- If the number of marks for two similar questions isn't the same, this is likely due to them being modelled on different specifications. In this case, it is worth considering both mark schemes.
- Use the number of marks for each question as a guide as to how much time to spend on each question. As a rough guide, you can multiply the number of marks by 1.2 to see how many minutes you should spend on a question.
- Questions will generally get more challenging as the document progresses. Some of the latter questions will go beyond the core grade level for this topic.

Advice

- Read each question carefully before you start to answer it.
- Don't forget to have fun.
- Check your answers at the end.

Q1. AtoZrevision.com

Fill in the missing numbers in the boxes.

$$\frac{1}{2} = \frac{12}{24}$$

(1 mark)

Q2. AtoZrevision.com

Fill in the missing numbers in the boxes.

$$\frac{2}{12} = \frac{1}{6}$$

(1 mark)

Q3. AtoZrevision.com

Fill in the box below to make these two fractions equivalent to each other.

$$\frac{12}{20} = \frac{3}{5}$$

(1 mark)

Q4. AtoZrevision.com

Fill in the missing numbers in the boxes.

$$\frac{1}{4} = \frac{6}{24}$$

(1 mark)

Q5. AtoZrevision.com

Fill in the missing numbers in the boxes.

$$\frac{3}{4} = \frac{9}{12} = \frac{18}{24}$$

(1 mark)

Q6. AtoZrevision.com

Complete the statement:

$$\frac{3}{7} = \frac{12}{28}$$

(1 mark)

Q7. AtoZrevision.com

Write the fraction $\frac{28}{70}$ in its simplest form.

2/5

.....

(1 mark)

Q8. AtoZrevision.com

Write 30 as a fraction of 48
Give your fraction in its simplest form.

5/8

.....

(2 marks)

Q9. AtoZrevision.com

Write 36 as a fraction of 96
Give your fraction in its simplest form.

3/8

.....

(2 marks)

Q10. AtoZrevision.com

In a football match, Barcelona had 74% possession of the ball.

Write this as a fraction in its simplest form.

$\frac{74}{100} = \frac{37}{50}$

$\frac{37}{50}$

.....

(2 marks)

Q11. AtoZrevision.com

There are 600 counters in a bag.
90 of the counters are yellow.

Work out 90 as a fraction of 600
Give your answer in its simplest form.

$\frac{9}{60} = \frac{3}{20}$

$\frac{3}{20}$

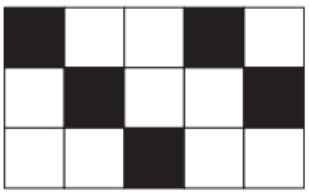
.....

(2 marks)

Q12. AtoZrevision.com

What fraction of the following diagram is shaded?

Write your answer in its simplest form.



$\frac{1}{3}$

.....

(2 marks)

Q13. AtoZrevision.com

Which fraction is **not** equal to $\frac{1}{2}$

$\frac{2}{4}$ $\frac{4}{8}$ $\frac{2}{5}$ $\frac{7}{14}$

M1 for counting to equivalent fractions.

A1

2/5

(2 marks)

Q14. AtoZrevision.com

Which two of these fractions are **not** equivalent to $\frac{2}{3}$?

$\frac{4}{6}$ $\frac{6}{10}$ $\frac{20}{30}$ $\frac{8}{12}$ $\frac{66}{100}$

M1 for counting to equivalent fractions

A1

6/10

(2 marks)

Q15. AtoZrevision.com

Which two of these fractions are equivalent to $\frac{1}{4}$?

$\frac{3}{10}$ $\frac{2}{8}$ $\frac{4}{12}$ $\frac{12}{40}$ $\frac{5}{20}$

M1 for equivalent fraction conversion.

A1

2/8 & 5/10

(2 marks)

Q16. AtoZrevision.com

Here are some fractions.

$$\frac{3}{8} \quad \frac{5}{12} \quad \frac{7}{24} \quad \frac{1}{6}$$

Which of these fractions is nearest in size to $\frac{1}{4}$?

M1 for attempting to convert 3 fractions

A1

7/24

.....

(2 marks)

Q17. AtoZrevision.com

12 litres of a drink is made by mixing water with 3 litres of orange juice.

What fraction of the drink is water?
Give your answer in its simplest form.

M1 9/12 or 3/4

A1

3/4

.....

(2 marks)

Q18. AtoZrevision.com

Karen makes a fraction using two number cards.

She says,

'My fraction is equivalent to $\frac{1}{2}$. One of the number cards is 6'

What could Karen's fraction be?

A1

3/6 or 6/12

M1 for either fraction

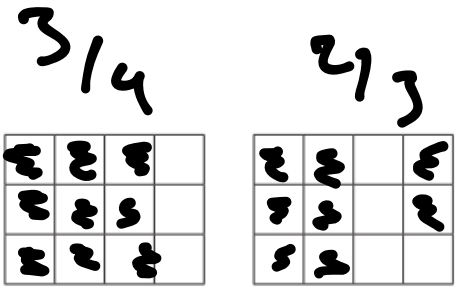
.....

(2 marks)

Q19. AtoZrevision.com

Which fraction, $\frac{3}{4}$ or $\frac{2}{3}$ is larger?

The grids below might help.



M1 for an attempt at equivalent fractions

A1

3/4

.....

(2 marks)

Q20. AtoZrevision.com

Which of these fractions has the largest value?

$\frac{8+5}{3}$ $\frac{8}{3+5}$ $\frac{3+5}{8}$ $\frac{8+3}{5}$ $\frac{3}{3+5}$

13/3 8/8 8/8 11/5 3/13

M1

M1 for a comparison of fractions.

A

13/3

.....

(3 marks)

Q21. AtoZrevision.com

Using all the digits from 1 to 9 inclusive, Zoe wrote down a fraction which had four digits in the numerator and five digits in the denominator. He then noticed that the fraction simplified to give exactly one half.

Which of the following could have been the numerator of Zoe's fraction?

5314 6729 7341 7629 8359

M1 for x2 (any value)
M1 for checking digits 1-9.

$6729 \times 2 = 13458$

$\therefore \frac{6729}{13458}$

A1

6729

.....

(3 marks)

Q22. AtoZrevision.com

Each of the fractions $\frac{2637}{18459}$ and $\frac{5274}{36918}$ uses the digits 1 to 9 exactly once.

The first fraction simplifies to $\frac{1}{7}$. What is the simplified form of the second fraction?

M1 look for comparison/simplification
A1 both fractions one equal. for second fraction

A1

1/7

.....

(3 marks)